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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,172	10/16/2000	Lawrence J. Andrews	WAB 00266	1113
7590	06/16/2004		EXAMINER	
James Ray & Associates 2640 Pitcairn Road Monroeville, PA 15146			PICKARD, ALISON K	
			ART UNIT	PAPER NUMBER
			3676	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/687,172	ANDREWS, LAWRENCE J.
	Examiner	Art Unit
	Alison K. Pickard	3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6, 10 and 14-21 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-6, 10 and 14-21 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Fiondella (5,337,787).

Fiondella discloses a device for securing a sealing member in a predetermined position comprising a positioning element and retaining element 40. The retaining element is integrally formed as an annulus on a first surface of the positioning element (see Figure 2). The retaining element has a bevel with a first end and second end. The retaining and positioning elements have equal inside diameters. The outside diameter (or the first end of the bevel) of the retaining element is smaller than the positioning element's and a radius is disposed tangent to the first end of the bevel and first surface. The bevel and first surface form a ledge that extends from a lower portion of the bevel to an outer edge of the surface. Fiondella discloses two positioning elements and two retaining elements. A spacer means (plural posts) is integrally provided between the two positioning and retaining elements.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fiondella.

Fiondella does not disclose that the number of posts is four. Using four posts is considered a design choice. See *In re Harza* 124 USPQ 378 (CCPA 1960). Further, it is known that a valve cage can have four posts as evidenced by Forster '540. Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use four posts as a matter of choice in design.

5. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Fiondella.

Claims 16-21 are considered Jepson claims because of the phrase "the improvement comprising." Therefore, everything before that phrase is considered admitted prior art. Thus, Applicant has disclosed a known combination of a plurality of spool valve shells with a pressure release valve having a high pressure port, low pressure port, spool valve, check valve, and a reset spool. Applicant has not disclosed spool valve shells comprising two positioning element, two retaining elements, a spacer means, and a sealing member. Fiondella teaches spool valve shells for use with valves, spool and ports. Fiondella teaches a sealing member (o-ring) 36 disposed between two opposing positioning elements of two adjacent valve shells 34. Each shell has two positioning elements, two retaining elements 40 and a spacer means. The retaining and positioning elements have equal inside diameters. The outside diameter of the retaining element is smaller than the positioning element's. Fiondella teaches that the shells/cages provide proper fluid sealing between ports in a valve body (col. 2, lines 56-59). Fiondella teaches that the retaining elements assist in the alignment and proper positioning of the cages and o-rings (col. 3,

lines 24-40). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the shells disclosed by the applicant with the shells taught by Fiondella to provide proper positioning and alignment of the cages and seals to ensure proper fluid sealing.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Fiondella as applied to claim 20 above, and further in view of Applicant's admitted prior art (spec. page 1, lines 19-21).

Fiondella discloses a resilient seal, but does not specify the material. Applicant admits that using nitrile material for a seal provides a leak-proof seal. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the seal of nitrile to provide a leak-proof seal.

Response to Arguments

7. Applicant's arguments entered 4-12-04 have been fully considered but they are not persuasive.

Applicant's argument that Fiondella does not disclose "a radius" is unpersuasive. First, Applicant has not provided any specific definition of "a radius" in the specification or figures that would distinguish it from that shown in Fiondella. As seen best in Fiondella's figure 2, the portion tangent the intersection of the first surface and first end of the bevel has a radius in that it has a distance from the center of the device 34. Also, this portion continues around the circumference of the device and can be considered a bounded or circumscribed area. A copy of Webster's definition of "radius" is attached. The portion of Fiondella meets these definitions.

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And, since (as stated before) Applicant has not provided an alternate definition, Fiondella meets the claimed limitations as well.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Alison K. Pickard
Primary Examiner
Art Unit 3676

AP

one side and exposed to a source of radiant energy; also : an instrument for measuring electromagnetic or acoustic radiation — **ra-di-o-mé-tric** \rā-dē-ō-'mē-trik\ adj [ISV] (1877) 1 : relating to, using, or measured by a radiometer 2 : of or relating to the measurement of geologic time by means of the rate of disintegration of radioactive elements — **ra-di-o-mé-tri-cal-ly** \tri-k(\o)lē\ adv — **ra-di-o-mi-met-ic** \rā-dē-ō-'mē-tik\ adj [ISV] (1947) : producing effects similar to those of radiation — **ra-di-o-nu-clide** \rā-dē-ō-'nū-kloid, -'nyü-\ n (1947) : a radioactive nuclide — **ra-di-opaque** \rā-dē-ō-'päk\ adj (ca. 1923) : being opaque to various forms of radiation (as X rays) — **ra-di-phar-ma-ceu-ti-cal** \rā-dē-ō-'far-mä-'sü-ti-käl\ n (1952) : a radioactive drug used for diagnostic or therapeutic purposes — **ra-diopharmaceutical** adj — **ra-diophone** \rā-dē-ō-'fon\ n (1919) : RADIOTELEPHONE — **ra-diopho-to** \rā-dē-ō-'fō-(tō)\ n (1929) : a picture transmitted by radio — **ra-di-pro-tec-tive** \rā-prä-'tek-tiv\ adj (1956) : serving to protect, or aiding in protecting against the injurious effect of radiations (~ drugs) — **ra-di-pro-tec-tion** \rā-prä-'tek-shän\ n — **ra-di-range** n (1929) : a radio facility for aircraft navigation — **ra-di-sensi-tive** \rā-dē-ō-'sen-tiv\ adj [ISV] (1920) : sensitive to the effects of radiant energy (~ cancer cells) — **ra-di-o-sen-si-tiv-i-ty**, \rā-dē-ō-'sen(t)-tiv-i-tē\ n — **ra-di-o-sonde** \rā-dē-ō-'sônd\ n [ISV] (1937) : a miniature radio transmitter that is carried aloft (as by an unmanned balloon) with instruments for broadcasting the humidity, temperature, and pressure — **ra-di-o spec-trum** n (1929) : the region of the electromagnetic spectrum usu. including frequencies below 30,000 megahertz in which radio or radar transmission and detection techniques may be used — **ra-di-star** n (1948) : a cosmic radio source; esp : a point source of radio emissions — **ra-di-stron-ium** \rā-dē-ō-'strän(t)-sh(ē)-üm, -'strän-tē-üm\ n [NL] (1941) : radioactive strontium; esp : STRONTIUM 90 — **ra-di-te-le-graph** \rā-tel-ä-gräf\ n [ISV] (1903) : WIRELESS TELEGRAPHY — **ra-di-te-leg-ra-phy** \rā-tel-ä-gräfē\ n — **ra-di-te-le-mé-tric** \rā-tel-ä-'mē-trik\ adj — **TELEMETRY** — **ra-di-te-me-tric** \rā-tel-ä-'mē-trik\ adj — **ra-di-te-phon-e** \rā-tel-ä-'fon\ n [ISV] (1904) : an apparatus for carrying on wireless telephony by radio waves — **ra-di-te-le-phon-y** \rā-tel-ä-fä-nē, -'tel-ä-fō-nē\ n — **ra-di-telescop-e** n (1929) : a radio receiver-antenna combination used for observation in radio astronomy — **ra-di-ther-a-py** \rā-dē-ō-'ther-ä-pē\ n [ISV] (1903) : the treatment of disease with radiation (as X rays) — **ra-di-ther-a-pist** \rā-pist\ n — **ra-di-tho-ri-um** \rā-thör-ë-üm, -'thör-ë-üm\ n [NL] (1905) : a radioactive isotope of thorium with the mass number 228 — **ra-di-trac-er** \rā-dē-ō-'trä-sär\ n (1946) : a radioactive tracer — **ra-di-ul-na** \rā-dē-ō-'äl-nä\ n [NL] (1960) : a single bone in the forelimb of an amphibian (as a frog) that represents fusion of the separate radius and ulna of higher vertebrate forms — **ra dio wave** n (1916) : an electromagnetic wave with radio frequency — **ra-di-um** \rā-dē-üm\ n, often attrib [NL, fr. L *radix* ray] (1899) : an intensely radioactive brilliant white metallic element that resembles barium chemically, occurs in combination in minute quantities in minerals (as pitchblende or carnotite), emits alpha particles and gamma rays to form radon, and is used chiefly in luminous materials and in the treatment of cancer — see ELEMENT table — **ra-di-um therapy** n (1904) : RADIOTHERAPY — **ra-di-us** \rā-dē-üs\ n, pl **ra-di-i** \rā-dē-ü\ also **ra-di-us-es** [L, ray, radius] (ca. 1611) 1 : a line segment extending from the center of a circle or sphere to the circumference or bounding surface 2 : a : the bone on the thumb side of the human forearm; also : a corresponding part of vertebrates above fishes 3 : the third and usu. largest vein of an insect's wing 3 a : the length of a radius (a truck with a short turning ~) b : the circular area defined by a stated radius c : a bounded or circumscribed area 4 : a radial part 5 : the distance from a center line or point to an axis of rotation — **radius of curvature** (ca. 1753) : the reciprocal of the curvature of a curve — **radius vector** (ca. 1753) 1 : a : the line segment or its length from a fixed point to a variable point b : the linear polar coordinate of a variable point 2 : a straight line joining the center of an attracting body (as the sun) with that of a body (as a planet) in orbit around it — **rad-i-ax** \rā-däks\ n, pl **rad-i-ces** \rā-dä-sëz, 'rä-\ or **ra-dix-es** \rā-dik-sëz\ [L, root — more at ROOT] (1798) 1 : the base of a number system or of logarithms 2 : the primary source — **radome** \rā-däm\ n [radar dome] (ca. 1944) : a plastic housing sheltering the antenna assembly of a radar set esp. on an airplane — **rad-on** \rā-dän\ n [ISV, fr. *radium*] (1918) : a heavy radioactive gaseous element formed by the decay of radium — see ELEMENT table — **rad-u-læ** \rā-jä-lä\ n, pl **lae** \rā-jé, -'lä\ also **la-las** [NL, fr. L, scraper, fr. *radere* to scrape — more at RODENT] (ca. 1859) : a horny band or ribbon in mollusks other than bivalves that bears minute teeth on its dorsal surface and tears up food and draws it into the mouth — **rad-u-lar** \rā-jär\ adj — **rad-waste** \rād-wäst\ n, often attrib [by shortening] (1973) : radioactive waste — **raff** \rāf\ n [ME *ruff* rubbish] (14c) : RIFFRAFF — **raffia** \rā-fä-ä\ n [Malagasy *rafig*] (1882) : the fiber of the raffia palm used esp. for tying plants and making baskets and hats — **raffia palm** (1897) : a pinnate-leaved palm (*Raphia farinifera* syn. *R. rufia*) of Madagascar that is valued for the fiber from its leafstalks — **raff-fi-nose** \rā-fä-nös, -'nöz\ n [F, fr. *raffiner* to refine, fr. *ré-* + *affiner* to make fine, fr. *a-* ad- (fr. *L ad-*) + *fin* fine] (1876) : a crystalline slightly sweet sugar, $C_{12}H_{22}O_{16}$ obtained commercially from cottonseed meal and present in many plant products

— **raff-ish** \rā-fish\ adj (1801) 1 : marked by vulgarity or crudeness, 2 : marked by a carelessness, **RAKISH** — **raff-ish-ly** adv — **raffishness** n — **raffle** \rā-fäl\ vb raffled, raffling [prob. *raf-fle* (prob. *raf-fle*) *vb* raffled, raffling] (1670) : engage in a raffle, ~ vi to dispose of by means of a raffle — **raffle** n [ME *rafle*, a dice game, fr. MF *rafle* ch. stakes can be won in a throw, lit., raffle for a fire, fr. *raf-fen* to snatch, gathered (1670)] : a game in which one of numerous persons has made a prize is won by one of the persons who made a raffle — **raffle** [prob. *raf-fle*] (1881) : RUBBISH esp. : a jumble or tangle of **rafflesia** \rā-flézh(ē)-së\, -sä\ n [NL, fr. *Sir Stamford* Eng. colonial administrator] (1830) : any of a family (Rafflesiacae) of Malaysian dicotyledonous plants in other plants and have fleshy, usu. yellowish, flowers emerging from the host, imbricated scales on the stems — **raft** \rāft\ n [ME *rafte* rafter, raft, fr. ON *raftr*] 1 : a collection of logs or timber fastened together for a raft 2 : a flat structure for support or transportation of a cohesive mass 3 : an aggregation of animals on the water — **raft** vi (1706) 1 : to transport in the form of or by a raft 2 : to convey (as pebbles) in floating ice on masses of ice 3 : to make into a raft ~ vi to travel by raft — **raft** n [alter. of *rafj* jumble] (1830) : a large collection of rafters — **raft-er** \rāft-er\ n [ME, fr. OE *rafster*, akin to ON *raftr*] 1 : any of the parallel beams that support a roof 2 : illustration — **raft-er** \rāft-er\ adj — **raft-er** \rāft-er\ n [raf-er]\ (1809) 1 : one who manufactures and binds them into rafts 2 : one who travels in a raft — **rafts-man** \rāft-ä-sän\ n (1776) : a man engaged in rafting — **rag** \rāg\ n [ME *ragge*, fr. (assumed) OE *raga* (fr. ON *raga*) (14c) 1 : a : a waste piece of cloth b : a ragged condition 2 : CLOTHING (the *rag trade*) 3 : a ragbag 4 : NEWSPAPER — **rag** n [ME *ragge*] (14c) 1 : any of various hard, rough, or coarse fabrics 2 : a roofing slate that is rough on one side — **rag** vi **ragged** \rāged\ ; **ragging** [origin unknown] (14c) 1 : SCOLD 2 : TORMENT, TEASE — **rag** n (1864) *chiefly Brit.* : an outburst of boisterous fun or merriment — **rag** n [short for ragtime] (1897) : a composition in ragtime — **raga** \rā-gä\ n [Skt *rāga*, lit., color, tone, akin to Skt *rāga-* Gk. *rhēzein* to dye] (1788) 1 : one of the ancient Indian patterns or modes in Indian music 2 : an improvisation in traditional raga — compare TALA — **ragamuffin** \rāg-ä-müf-in\ n [ME *Ragamuffyn*, name of a foolish person] (1581) : a ragged often disreputable person poorly clothed often dirty child — **ragbag** \rāg-bag\ n (1820) 1 : a bag for scraps 2 : a collection of odds and ends — **rag doll** n (1853) : a stuffed usu. painted cloth doll — **rage** \rāg\ n [ME *raga*] (1812) : RAILROAD: esp. a railroad 2 : to prevail uncontrollably — **rage** vi **ragged** \rāged\ ; **ragging** [origin unknown] (14c) 1 : to be mad; akin to Skt *rabhas* violence (14c) 2 : to rage 3 : to be uncontrolled anger b : a fit of violent wrath, *rage* — **rage** n [prob. *rag*] (1825) : violent action (as of wind or sea) 3 : an intense feeling of rage — **GER. FASHION** — **rage** vi **ragged**; **rag-ing** (14c) 1 : to be in a rage 2 : to rage 3 : to prevail uncontrollably — **ragged** \rāged\ adj (14c) 1 : roughly unkempt 2 : having irregular edge or outline 3 a : torn or worn to tatters b : worn to stress and strain *crash* herself ~ 4 : wearing tattered cloth — **ragged** b : executed in an irregular or uneven manner 5 : STRAGGLY — **raggedy** \rāg-ä-dey\ adj (1890) : raggedly — **raggedy** adj — **raggedy robin** (1741) : a perennial herb (*Lychins*) *circumscripta* cultivated for its pink flowers with narrow lobed petals — **raggedy** \rāg-ä-dey\ adj (1890) : RAGGED — **raggle-taggle** \rāg-ä-täg-ä\ adj [irreg. fr. *raggle*] (1904) : MESSY — **raggi** \rāg-ä\ n [prob. *Ir. Deccan Hindi* *ragi*] (1825) a : a tall grass (*Eleusine coracana*) yielding a staple food crop esp. in India and Africa; also : the seeds of ragi used for food 2 : World cereal grass (*Eleusine coracana*) yielding a staple food crop esp. in India and Africa; also : the seeds of ragi used for food — **raging** adj (15c) 1 : causing great pain or distress 2 : EXTRAORDINARY, TREMENDOUS (a ~ success) — **raglan** \rāglän\ n [F J.H. Somerset, Baron Raglan (1807-1884), marshal] (ca. 1859) : a loose overcoat with raglan sleeves — **raglan sleeve** n (ca. 1924) : a sleeve that extends to the neckline with slanted seams from the underarm to the neck — **rag-man** \rāg-män\ n (1586) : a man who collects old rags — **Ragnarök** \rāg-nä-rok\ n [ON *Ragnarök*] lit., fate, destruction, fr. *ragnar*, gen. pl. of *regin* gods + *rok* fate, course (later understood as *Ragnarokkr*, lit., twilight of the gods); the final destruction of the world in the conflict between the Aesir and the powers of Hel led by Loki — called also *Twilight of the Gods* — **ragout** \rāg-üüt\ n [F *ragout*, fr. *ragoûter* to revive the taste of food] 1 : a ragout 2 : a dish of meat and vegetables cooked in a thick sauce 3 : MIXTURE, MEAL — **rag-pick-er** \rāg-pik-är\ n (1860) : one who collects rags for a livelihood — **rag-tag**, **rag-tag**, adj [ragtag and bobtail] (1882) 1 : RAGGED, UNKEMPT 2 : MOTLEY 2 (a : bunch of misfits) — **ragtag and bobtail** n [ragtag + *bobtail*] (1820) : RABBLE — **rag-time** \rāg-tim\ n [prob. fr. *ragged* + *time*] (1897) : a musical style characterized by strong syncopation in the melody, with a regular accented accompaniment 2 : music having ragtime rhythm — **rag-top** \rāg-täp\ n (1953) : a convertible automobile — **rag-weed** \rāg-wéd\ n (1790) : any of various chiefly No. American weedy composite herbs (genus *Ambrosia*) that produce highly allergenic pollen — **rag-wort**, **-wört**, **-wörkt** n (14c) : any of several senecios; esp.: TANSY RAGWORT — **rah** \rā\, \rā', \rā\ interj (1870) : HURRAH — used esp. to cheer on a team in a later performance 2 : an assurance that a customer can take advantage if it is rained out 3 : an offered extension of an offer; esp.: an assurance that a customer can take advantage if it is rained out